

COUNCIL ON GRADUATE MEDICAL EDUCATION

2002 SUMMARY REPORT

June 2002

COUNCIL ON GRADUATE MEDICAL EDUCATION

2002 SUMMARY REPORT

June 2002

The views expressed in this document are solely those of the Council on Graduate Medical Education and do not necessarily represent the views of the Health Resources and Services Administration or the United States Government.

TABLE OF CONTENTS

COGME REPORTS AND RESOURCE PAPERS	v
MEMBERS OF THE COUNCIL ON GRADUATE MEDICAL EDUCATION	vii
ACKNOWLEDGEMENTS	ix
EXECUTIVE SUMMARY	xi
INTRODUCTION	1
COGME's Origins	1
COGME's Advisory Process	2
REVIEW OF COGME'S PAST WORK	3
The Size and Mix of the Physician Workforce	3
The Distribution of the Physician Workforce	5
Minority Representation in the Physician Workforce	6
International Medical Graduates in the Physician Workforce	8
Women in Medicine	9
Improvements in Medical Education	10
Financing Graduate Medical Education	11
THE CHANGING NATURE OF HEALTH CARE IN AMERICA	15
Aging of the U.S. Population	15
Increasing Diversity of the U.S. Population	15
Rising Health Care Costs	15
Shift of Care from Hospitals to Ambulatory Settings	15
Unprecedented, Rapid Scientific and Technological Advances	15
Continuing Changes in Health Care Financing	16
The New Marketing and Consumerization of Health Care	16
FUTURE WORKFORCE ISSUES REQUIRING COGME DELIBERATIVE STUDY	17
Physician Workforce	17
The Specialty Physician Workforce	17
Effect of Primary Care Providers Other Than Physicians on Health Care	17
Graduate Medical Education and Unionization	18
Adequacy of Health Care Workforce Data	18
Care for the Underserved	18
Changing Models of Insurance and Physician Workforce Needs	19
Collaboration Among Health Professionals to Improve the Quality of Health Care	19
CONCLUSION	21
REFERENCES	23
APPENDIX: COGME REPORTS IN THE CONTEXT OF HEALTH CARE EVENTS	25

COGME REPORTS AND RESOURCE PAPERS

COGME reports are available at the Department of Health and Human Services, Health Resources and Services Administration (<http://www.cogme.gov>).

- First Report of the Council, Vol. I and Vol. II (1988)
- Second Report – The Financial Status of Teaching Hospitals and the Underrepresentation of Minorities in Medicine (1990)
- Supplement to Second Report: The Financial Status of Teaching Hospitals and the Underrepresentation of Minorities in Medicine (1991)
- Addendum to the Second Report of the Council: The Financial Status of the Department of Veterans Affairs Teaching Hospitals (1991)
- Scholar in Residence Report – Reform in Medical Education and Medical Education in the Ambulatory Setting (1991)
- Third Report – Improving Access to Health Care Through Physician Workforce Reform: Directions for the 21st Century (1992)
- Fourth Report – Recommendations to Improve Access to Health Care Through Physician Workforce Reform (1994)
- Fifth Report – Women in Medicine (1995)
- Sixth Report – Managed Health Care: Implications for the Physician Workforce and Medical Education (1995)
- Seventh Report – COGME 1995 Physician Workforce Funding Recommendations for Department of Health and Human Services' Programs
- Report to Congress – Process by Which International Medical Graduates Are Licensed to Practice in the United States (1995)
- COGME-NACNEP – Joint Report With the National Advisory Council on Nurse Education and Practice – Report on Primary Care Workforce Projections (1995)
- Eighth Report – Patient Care Physician Supply and Requirements: Testing COGME Recommendations (1996)
- Ninth Report – Graduate Medical Education Consortia: Changing the Governance of Graduate Medical Education to Achieve Physician Workforce Objectives (1997)
- Resource Paper – Preparing Learners for Practice in a Managed Care Environment (1997)
- Tenth Report – Physician Distribution and Health Care: Challenges in Rural and Inner City Areas (1998)
- Eleventh Report – International Medical Graduates, the Physician Workforce, and GME Payment Reform (1998)
- Twelfth Report – Minorities in Medicine (1998)
- Resource Paper – International Medical Graduates: Immigration Law and Policy and the U.S. Physician Workforce (1998)
- Thirteenth Report – Physician Education for a Changing Health Care Environment (1999)
- Fourteenth Report – Physician Workforce Policies: Recent Developments and Major Challenges in Meeting National Goals (1999)
- Resource Paper – The Effects of the Balanced Budget Act of 1997 on Graduate Medical Education (2000)
- Resource Paper Compendium – Update on the Physician Workforce (2000)
- Resource Paper – Evaluation of Specialty Physician Workforce Methodologies (2000)
- Fifteenth Report – Financing Graduate Medical Education in a Changing Health Care Environment (2000)
- COGME-NACNEP Joint Report – Collaborative Education to Ensure Patient Safety (2000)
- Council on Graduate Medical Education: What is it? What has it done? Where is it going? (2000)

- Council on Graduate Medical Education: What is it? What has it done? Where is it going? 2nd Edition (2001)
- Proceedings of the GME Financing Stakeholders Meeting: Public Response to COGME's Fifteenth Report (2001)

MEMBERS OF THE COUNCIL ON GRADUATE MEDICAL EDUCATION

MEMBERS

Chair

Carl J. Getto, M.D.

Senior Vice President Medical Staff Affairs
Associate Dean Hospital Affairs
University of Wisconsin Hospital & Clinic
Madison, Wisconsin

Vice Chair

F. Marian Bishop, Ph.D., M.S.P.H.

Professor and Chair Emerita
Department of Family and Preventive Medicine
University of Utah School of Medicine
Salt Lake City, Utah

Regina M. Benjamin, M.D., M.B.A.

Associate Dean for Rural Health
University of South Alabama
Owner and CEO
Bayou La Batre Rural Health Clinic
Bayou La Batre, Alabama

William Ching

Medical Student
New York University School of Medicine
New York, New York

Allen Irwin Hyman, M.D., FCCM

Executive Vice President and Chief of Staff
Columbia-Presbyterian Medical Center
New York, New York

Robert L. Johnson M.D.

Professor of Pediatrics and Vice Chair
Department of Pediatrics
Division of Adolescent and Young Adult Medicine
New Jersey Medical School
Newark, New Jersey

Ann Kempfski

Assistant Director Health Policy
American Federation of State, County, and Municipal
Employees
Washington, D.C.

Laurinda L. Merritt, LCSW-BACS

Director of Behavioral Medicine
Family Medicine Residency Program
Baton Rouge General Medical Center
Baton Rouge, Louisiana

Lucy Montalvo, M.D., M.P.H.

San Diego, California

Jerry Alan Royer, M.D., M.B.A.

Senior Vice President and Chief Medical Officer
Mercy Health Plans
Chesterfield, Missouri

Susan Schooley, M.D.

Chair, Department of Family Practice
Henry Ford Health System
Detroit, Michigan

Humphrey Taylor

Chairman, The Harris Poll
Harris Interactive
New York, New York

Donald C. Thomas, III, M.D.

St. Petersburg Beach, Florida

Douglas L. Wood, D.O., Ph.D.

President
American Association of Colleges of Osteopathic
Medicine
Chevy Chase, Maryland

Designee of the Assistant Secretary for Health

Vacant

Designee of the Centers for Medicare and Medicaid Services

Tzvi M. Hefter
Director, Division of Acute Care
Baltimore, Maryland

Designee of the Department of Veterans Affairs

Stephanie H. Pincus, M.D., M.B.A.
Chief Academic Affiliations Officer
Washington, D.C.

STATUTORY MEMBERS**Eve E. Slater, M.D., F.A.C.C.**

Assistant Secretary for Health
Department of Health & Human Services
Washington, D.C.

Tom Scully

Administrator, Centers for Medicare and Medicaid
Services
Department of Health & Human Services
Washington, D.C.

Thomas L. Garthwaite, M.D.

Undersecretary for Health
Veterans Health Administration
Department of Veterans Affairs
Washington, D.C.

FORMER MEMBER CONTRIBUTING TO REPORT

Jo Ivey Boufford, M.D.
Dean, Robert F. Wagner Graduate School of Public
Service, New York University
New York, New York

COGME STAFF**Carol Bazell, M.D., M.P.H.**

Director
Division of Medicine and Dentistry

Stanford M. Bastacky, D.M.D., M.H.S.A.

Acting Executive Secretary
Chief, Dental and Special Projects Branch
Division of Medicine and Dentistry

Jerilyn K. Glass, M.D., Ph.D.

Acting Deputy Executive Secretary

C. Howard Davis, Ph.D.

Staff Liaison

Richard Diamond, M.D., M.P.A.

Staff Liaison

Jerald M. Katzoff

Staff Liaison

Helen K. Lotsikas, M.A.

Staff Liaison

Herbert Traxler, Ph.D.

Staff Liaison

Eva M. Stone

Program Analyst and Committee Management Specialist

Anne Patterson

Secretary

ACKNOWLEDGEMENTS

Jerilyn K. Glass, M.D., Ph.D.

Richard Diamond, M.D., M.P.A.

C..Howard Davis, Ph.D.

P. Hannah Davis, M.S.

Jerald M. Katzoff

Helen K. Lotsikas

Herbert Traxler, Ph.D.

Carol M. Bazell, M.D., M.P.H.

Stanford M. Bastacky, D.M.D., M.H.S.A.

Members of COGME

EXECUTIVE SUMMARY

The Council on Graduate Medical Education (COGME) was authorized in 1986 as an advisory council to Congress and the Secretary of the Department of Health and Human Services (DHHS) on matters concerning graduate medical education and the physician workforce. The Council's members include representatives of practicing primary care physicians, national and specialty physician organizations, international medical graduates (IMGs), medical student and house staff associations, schools of allopathic and osteopathic medicine, public and private teaching hospitals, health insurers, business, and labor. This unique body has been able to provide high quality professional advice on the most important health policy issues facing the Nation.

COGME carries out its work by commissioning studies on emerging and high priority health workforce policy issues, debating the findings of its studies, obtaining the views of relevant outside groups, and submitting its conclusions and recommendations to Congress or the Secretary of DHHS on these important subjects.

The state of the Nation's health care workforce directly affects both the health of the American public and the economics of health care. To the extent that the health workforce proves inadequate in numbers or geographic distribution to meet the needs of the public and the systems of health care in the country, then access to quality health care may be impeded, and overall health status adversely affected. To the extent that the workforce becomes unbalanced in relation to the public's needs for specific types and numbers of health care practitioners, then the system becomes inefficient and suboptimal in the quality of its processes and outcomes.

The basic issue of workforce size and composition occupied much of COGME's deliberations. During the 1960s and 1970s, when the physician workforce was perceived to be in shortage, State and Federal policies and programs were enacted to counter those shortages. By 1986, the situation had changed, with overall surpluses projected, and shortages remaining only in some specialty areas. COGME examined this complex issue in several of its major reports, focusing on overall

numbers; the balance between primary care and subspecialty care; the required balance of the physician workforce in terms of race, gender, and ethnic composition; and the role of IMGs in the overall supply system. COGME's reports have helped to focus the attention of policy makers on the value of a physician workforce that reflects the gender, race, and ethnicity of the U.S. population. Achieving a balanced workforce is necessary to maintain the high quality care system expected by the population.

COGME devoted considerable attention to the issue of physician distribution. Few problems have been as enduring as the inadequate numbers of physicians practicing in rural and inner-city areas. In its reports, the Council examined the reasons for physician reluctance to practice in underserved areas and pointed out programs, particularly the National Health Service Corps and those under Title VII of the Public Health Service Act, that have successfully trained primary care physicians who choose to practice in these areas. The Council has recommended curricular change in medical education, efforts to resolve the financial barriers to care in underserved areas, and an improved practice environment for physicians who work in these communities.

While the Nation has become increasingly multi-ethnic, its physician workforce has yet to achieve the same diversity. Lack of academic preparation, encouragement, and financial resources were identified as contributing factors to the problem of low minority student enrollment in medical schools. The Council underscored the need for more effective recruitment of multi-ethnic faculty and student pools at all levels of the Nation's educational system. Equally important is the development of cultural competence in all physicians. The focus should be on improved communication skills, an understanding of culture-specific health beliefs, and an awareness of barriers to health care access.

COGME returned several times to the complex issue of IMGs, their role in providing service to underserved regions, and their contribution to physician surpluses. While the original intent of the exchange visitor program was to permit graduates from other

countries to obtain more advanced training than they would find in their own countries, more IMGs than expected found ways to remain legally in the U.S. after their training. Many have sought training in primary care specialties and subsequently elected to practice in U.S. shortage areas. In its recommendations, the Council focused on the costs and benefits of IMGs and their effects on workforce supply.

Medical education feeds the physician workforce. COGME believes it to be imperative that undergraduate and graduate medical education continually make improvements in order to provide future physicians with the most appropriate training possible. The Council's publications have particularly focused on training that has high quality, community-based clinical opportunities and that develops the abilities of students and residents to respond to emerging public health needs. How to finance graduate medical education (GME) has been the subject of considerable discussion. COGME issued several reports providing a comprehensive view of key issues and alternatives in the ongoing debate. The Council's strongly held position is that a stable and equitable source of long-term financing for GME is vital, one in which all payers share the costs of physician training.

Future physician practice will require close collaboration among the health professions in order for the Nation to have high quality patient care. The Council issued two reports in partnership with the National Advisory Council on Nurse Education and Practice (NACNEP). The two councils explored the barriers to physician-nurse collaboration and suggested means to improve it. They and the Institute of Medicine held a June 2002 multidisciplinary summit in which health care leaders developed a work plan to improve health professions education and practice.

The Council expects that there will be at least as much change over the next 25 years as there has been over the past 25 years. Some of the issues now emerging are the role of genetics in health care, the aging of the population, continuing changes in population demographics, and the growing threat of terrorism around the world. These issues all create new challenges for the health care system and the education system that will provide the expanding pool of future health care providers.

COGME believes strongly that there will continue to be a need for a council on graduate medical education with the same structure and function as COGME following COGME's termination on September 30, 2002. COGME believes

it has been successful in ensuring that vital issues affecting the health professions have received thorough analysis under its current structure and function and that options have been presented in a fashion that stimulated open, far-ranging discussion. COGME members, therefore, offer the following recommendations:

- (1) A council on graduate medical education should be authorized to advise the Secretary of DHHS and Congress on appropriate Federal policy pertaining to the physician workforce and graduate medical education.
- (2) A council on graduate medical education should focus on the adequacy of the supply and distribution of the Nation's physicians, IMGs, financing of undergraduate and graduate medical education programs, and improvement of existing databases.
- (3) A council on graduate medical education should be authorized under Title VII of the Public Health Service Act.
- (4) A council on graduate medical education should be authorized for a minimum of five years to allow sufficient time for a thorough analysis of physician workforce trends, and physician training and financing issues.
- (5) A council on graduate medical education should be composed of:
 - a. The Assistant Secretary for Health or the designee of the Assistant Secretary.
 - b. The Administrator of the Centers for Medicare and Medicaid Services.
 - c. The Chief Medical Director of the Department of Veterans Affairs.
 - d. Six members appointed by the Secretary of DHHS to include representatives of practicing primary care physicians, national and specialty physician organizations, IMGs, and medical student and house staff associations.
 - e. Four members appointed by the Secretary of DHHS to include representatives of schools of medicine and osteopathic medicine and public and private teaching hospitals.
 - f. Four members appointed by the Secretary of DHHS to include representatives of health insurers, business, and labor.

COGME has been successful in ensuring that vital issues affecting the health professions, especially the physician workforce, have received thorough analysis

and that options have been presented that stimulated wide discussion. The Council believes that a new council should have the same purpose, functions, and composition, as did COGME. A new council should have diverse categories of membership that would provide a

broad perspective from the multiple interests that comprise the health care system. COGME's function of providing support to Congress and the Secretary of DHHS needs to continue in a new council in order to facilitate wise policy decisions.

INTRODUCTION

The Council on Graduate Medical Education (COGME) was authorized in 1986 to provide expert advice on physician workforce needs and medical education. The Council's termination date is September 30, 2002. This report has been prepared to summarize COGME's contributions to the ongoing debate about the adequacy of the physician workforce and medical training in relation to the Nation's system of health care.

COGME'S ORIGINS

With the passage of the Health Professions Educational Assistance Act of 1976, Congress ended previous policies aimed at countering a perceived national shortage of physicians. Instead of focusing on the aggregate number of physicians entering the workforce, new policies were implemented to target geographic and primary care shortages. Funding for family practice residencies, first provided in 1971, was codified in the Health Professions Educational Assistance Act of 1976.

During that same year, the Department of Health, Education and Welfare (DHEW), now the Department of Health and Human Services (DHHS), established the Graduate Medical Education National Advisory Committee (GMENAC) to advise the Secretary of DHEW on the physician workforce. GMENAC projected that there would be an overall physician surplus by the 1990s, with shortages in a few medical specialties. The Committee also highlighted the uneven geographic distribution of physicians and the need to address medical education and training in the context of workforce needs. While its report was controversial, GMENAC provided workforce projections that were widely discussed and debated. Between GMENAC's termination in 1980 and 1986, there was no public advisory body for physician workforce analyses and recommendations.

By the mid-1980s, debate about the physician workforce had centered on several key issues:

- Current and future adequacy of primary care and specialty physician supply.
 - Financing and other needs in medical education programs.
 - International medical graduates.
 - Needs for data to analyze these issues.
- In response to the continuing need for expert counsel, Congress (Title VII of the Public Health Service Act, Section 799 (H), P.L. 99-272) in 1986 authorized COGME to study health care workforce issues and advise Congress and the Secretary of DHHS on these matters. The statute specified that COGME members be chosen from broad and diverse categories representing distinct components and groups within the medical education and health care system.
- While the original statute called for COGME to terminate on September 30, 1996, the termination date was changed to September 30, 1995 (Title III, Health Professions Education Extension Amendments of 1992, Section 301, P.L. 102-408). By appropriations legislation, the Council's life was extended through the end of fiscal year 1998. COGME was reauthorized with a termination date of September 30, 2002 when the Health Professions Education Partnerships Act of 1998 (P.L. 105-392) redesignated the Council on Graduate Medical Education as Section 762 [294o] of Title VII of the Public Health Service Act.
- No other public advisory body offers opinions formulated on these issues from the combined perspective of primary care and specialty care providers representing allopathic and osteopathic disciplines, medical educators, health professions students and trainees, international medical graduates, health care professional associations, public and private hospitals, business, labor, health insurers, and managed care organizations.
- In recent years, the health care system being examined by COGME has undergone major changes:
- A dramatic shift has occurred from fee-for-service payment to managed care systems.
 - Care has shifted from hospitals to ambulatory sites and has focused increasingly on management of chronic illness.

- Significant numbers of Americans continue to lack health insurance, despite changes in how we finance and manage health care.
- Care for an expanding elderly population needs to be addressed
- Disparities remain in the geographic distribution of physicians and in basic access to health care for underserved populations.

The challenge to medical schools is to prepare physicians for these changes and to respond to future challenges.

COGME'S ADVISORY PROCESS

COGME has responded to this changing context of health care issues, assuring that Congress, the Secretary of DHHS, and the public have access to thoughtful, broad-based recommendations on these critical subjects. Typically, COGME invites experts to its meetings who present new data and information and who participate in discussions. The Council decides which issues to address formally through specific workgroups, and commissions expert reports that are prepared for publication. Then, COGME reports are released in draft for public comment. Upon final approval by the Council, reports are submitted to the Congress and the Secretary of DHHS, and distributed to leaders in health care and the general public.

At the time of its earliest deliberations, COGME adopted a set of principles to guide its work, all related to its primary concern for the health of the American people:

- Adequacy of the health professions, medical schools, and teaching hospitals should be assessed within the context of the need to assure that all Americans have access to quality health care.
- Diverse needs of rural and inner-city areas and minority populations need to be considered.
- A strong system of medical education must be maintained in order to provide access to quality medical care through an adequate and diverse supply of physicians educated for current and future practice.
- The interrelationships among services provided by physicians and other health care professionals need to be recognized.

Beginning with an initial report to the Congress and the Secretary of DHHS in July 1988, COGME has issued 16 formal reports, two joint reports in collabo-

ration with the National Advisory Council on Nurse Education and Practice (NACNEP), and five resource papers. These reports and papers have illuminated the most important health care issues affecting the physician workforce. An appendix highlights the dates of each COGME publication, together with a brief summary of the changing context of issues and legislation affecting the physician workforce and health care in general.

In reviewing the issues that COGME has addressed over the years, certain topics recur despite the unprecedented changes in the Nation's health care system. These themes include:

- ACCESS TO HEALTH CARE.
 - Adequacy and quality of the primary care and specialty physician supply.
 - Adequacy of the geographic distribution of physicians.
 - Representation of women in medicine.
 - Representation of minorities in medicine.
 - Role of international medical graduates.
 - Access to health care in traditionally underserved populations and regions, such as rural and inner city areas.
- MAINTENANCE AND IMPROVEMENTS IN THE QUALITY OF HEALTH CARE.
 - Health disparities among underserved populations.
 - Improving patient safety.
 - Educating physicians to meet future needs.
 - Interdisciplinary education and practice for health care professionals.
 - Improving the cost-effectiveness of health care.
- FINANCING MEDICAL EDUCATION PROGRAMS.
 - Sustainability of teaching hospitals.
 - Role of financing in integrating ambulatory care and rural health care systems into the medical education system.
- DATA SYSTEMS REQUIRED TO ANALYZE THESE ISSUES.
 - Funding of analyses of primary care data collected by independent sources.
 - Examination of the quality of workforce data sources.
 - Recommendations for improving data systems.

REVIEW OF COGME'S PAST WORK

The charge to COGME is broader than the name would imply. Title VII of the Public Health Service Act, as amended, requires COGME to provide advice and recommendations to the Secretary of DHHS and Congress on the following issues:

- (1) The supply and distribution of physicians in the United States.
- (2) Current and future shortages or excesses of physicians in medical and surgical specialties and subspecialties.
- (3) International medical graduates.
- (4) Appropriate Federal policies with respect to the matters specified in items 1-3, including policies concerning changes in the financing of undergraduate and graduate medical education (GME) programs and changes in the types of medical education and training in GME programs.
- (5) Appropriate efforts to be carried out by hospitals, schools of medicine, schools of osteopathy, and accrediting bodies with respect to the matters specified in items 1-3, including efforts for changes in undergraduate and GME programs.
- (6) Deficiencies in data bases concerning the supply and distribution of, and postgraduate training programs for physicians in the United States, and steps that should be taken to eliminate those deficiencies.

In responding to its Congressional charge, COGME has addressed the following issues.

THE SIZE AND MIX OF THE PHYSICIAN WORKFORCE

COGME has a major responsibility to monitor the Nation's supply of physicians and to recommend policy and program changes needed to assure the adequacy of the current and projected supply. In the few years following COGME's creation, the U.S. health care system was acknowledged to be in crisis. Of critical concern were current and projected adequacies of physician supply, both in the aggregate and by specialty. In 1988, COGME (First Report) began projecting a likely

aggregate oversupply of physicians. Because of significant uncertainties that could change the assessment of aggregate supply, the Council recommended that the public and private sectors concentrate on the clearly identified problems of geographic maldistribution of physicians, continued underrepresentation of minorities in medicine, specialty shortages, and issues of quality of care.

Health care expenditures in 1990 exceeded \$650 billion, with costs projected to reach one trillion dollars by 1995. Despite these dramatic cost increases, inequalities in access to health care began to receive national attention. The number of medically uninsured Americans was expected to reach 37 million by 1995, and millions more faced non-financial barriers to basic health care. Furthermore, the Nation's basic health status indicators, which are in some measure influenced by access to health care, lagged behind those in most economically developed countries.

COGME recognized that health care reform to ensure access to basic care for all Americans is not possible without physician workforce reform. It was at this time that COGME issued its Third Report (1992). The Council argued that a series of deficiencies in physician supply was responsible for a mismatch between physician workforce and public need. In general, there were too few primary care physicians (family physicians, general internists, and general pediatricians) and too many specialists and subspecialists. Additionally, the geographic distribution of physicians was problematic, with growing access problems in inner city and rural areas.

The 110:50/50 Concept

In its Third Report (1992), COGME advanced a national physician workforce goal of a system in which 50 percent of physicians would practice in primary care disciplines and 50 percent in specialties or subspecialties. For that goal to be achieved, 50 percent of residents would need to enter primary care practice after completing three years of graduate education in family medicine, general internal medicine, or general pediatrics. At the time of its recommendation, only 30 percent of graduates were entering practice in

primary care. While the 50/50 principle had been discussed in workforce circles as early as the 1970s, COGME brought the idea to prominence and later incorporated it into what became known as the "110:50/50" recommendation that was reiterated in the Fourth (1994), Sixth (1995), Seventh (1995), and Eighth (1996) Reports.

In the "110 : 50/50" recommendation, the "110" portion derives from the goal to correct the then perceived emerging oversupply of physicians by limiting first-year residency positions to ten percent more than the number of U.S. allopathic and osteopathic medical school graduates. COGME selected the year 1993 as the reference point for the additional ten percent. The recommendation to limit the number of physicians entering residency training to 110 percent of medical school graduates would have represented a sizable decrease from the 1993 figure of 140 percent. In concrete terms, COGME's recommendation meant that first year residency positions in the U.S. would be reduced from 25,000 to approximately 19,600. Overall, physician supply excess was considered a contributing factor to increases in health care costs that were not accompanied by improvements in the health of the public at large.

GME Consortia

COGME was concerned that an undersupply of primary care physicians would be exacerbated if the Nation established universal access to care as envisioned in President Clinton's health care reform plan of 1993-1994. COGME made extensive legislative recommendations to achieve the "110:50/50" goal.

The Council (Fourth Report, 1994) recommended that the Nation develop a physician workforce plan. Within the context of health care reform, COGME recommended that GME consortia be established as the heart of the plan. Each consortium would be coordinated by a medical school, and the consortium would be accountable within the "110:50/50" framework for allocating the number and specialty mix of residency positions based on local, State, and regional health care needs and on broad national guidelines. Each consortium would include teaching hospitals, HMOs, and other institutions that train physicians, use their services, or represent the public.

The consortia approach was designed to minimize State and Federal Government intrusion and maximize private sector involvement. Financial incentives provided by Medicare and other payers would have the

goal of training more primary care physicians and assisting educational institutions to expand and improve the quality of primary care programs. Public funds would be used to support primary care practice in inner city and rural areas through (1) National Health Service Corps scholarships and loans, and (2) differential Medicare and Medicaid reimbursement provisions for physician practice in shortage areas.

By the time of COGME's Fourteenth Report (1999), the Council had seen a decade of changes in the American health care system that could significantly impact the Nation's physician supply and requirements. There had been a number of statutory and non-statutory changes related to GME, including the Balanced Budget Act in 1997. The Fourteenth Report was written to assess these changes related to the physician workforce and GME and the potential impact on the supply, demand, and training of physicians in coming years. While the rate of growth in the physician supply had moderated slightly, the Council still believed a physician oversupply was likely.

With regard to the "110:50/50" goal, the Council found that only limited progress had been made in reducing the number of physicians in training. In 1997, the percentage of entrants into residency positions was 129 percent of the number of 1993 U.S. medical school graduates, a decline from 140 percent, but still short of the 110 percent goal. An increase in residency positions filled by exchange visitor international medical graduates (IMGs) caused some concern. A large number of IMGs were able to remain in the country, further adding to the U.S. physician workforce.

In terms of primary care residencies, the Council found progress had been made. The number of entering residents likely to go into primary care practice had increased to two-fifths of the 129 percent. COGME concluded, however, that, while there were encouraging signs, the Nation was still producing too few generalists and too many specialists.

Continued Need for a National Health Workforce Plan

In the Fourteenth Report, the Council particularly noted that there was still no system for health workforce planning and highlighted the sharp rise in the number of physician assistants, nurse practitioners, and other health professionals. Their continuing growth would likely have major implications for physician workforce planning.

The health care delivery system has undergone rapid and substantive changes since the Council introduced

the “110:50/50” recommendations. COGME recognizes the need to re-examine these goals through new analyses. Some have suggested that the numbers of primary care physicians now may be adequate and shortages may exist in certain specialty areas. Further analyses are expected to be complex. Current physician workforce data make it difficult to assess the numbers of physicians who may be classified as subspecialists but function as primary care providers for at least some of their patients. A recent study commissioned by COGME suggests that in light of declines in IMGs and possible reductions in hours worked and other factors affecting productivity, limiting GME slots to 110 percent of 1993 U.S. medical graduates may produce shortages rather than assuring balance.¹ A New York State resident exit survey conducted in 2000 found that the job market for graduates was considerably softer for primary care physicians than for specialists.²

U.S. medical schools are experiencing shifts in the population of students seeking admission to professional education in medicine. The number of women applicants has increased 62.3 percent over the past 20 years and represents 46.6 percent of the total academic year 2000 applicants.³ Entrants to graduate medical education programs have evolving professional expectations, increasing concerns and demands regarding the balance between professional and personal goals, and mounting education debt loads. According to the Association of American Medical Colleges, indebted medical school graduates owed an average of \$90,745 in 1999, and 13.9 percent had educational debts exceeding \$150,000.⁴ These and other factors affect specialty choice in residency training and the ultimate composition and behavior of the physician workforce.

COGME recently broached the topic of specialty and subspecialty workforce methodology in its examination of the adequacy of physicians in specific specialty areas, *Evaluation of Specialty Physician Workforce Methodologies* (2000). The report provides a comprehensive review of the specialty literature, which underscores how complex and difficult these analyses are. The studies, largely conducted by various specialty and subspecialty groups, varied in purpose and design, and relied on different estimation models and data sources to project future workforce supply and demand. This variation prevented any conclusions about the size and adequacy of the specialist physician workforce. Moreover, the studies did not account for the complexity and elasticity of the physician workforce market, the broader medical and health care delivery marketplace, and the effects of population growth and technological change. The Council called for the develop-

ment of valid and unambiguous models to guide the study of the specialty workforce.

THE DISTRIBUTION OF THE PHYSICIAN WORKFORCE

No other characteristic of the physician workforce has posed as enduring a problem as geographic distribution. COGME devoted its Tenth Report (1998) to an examination of distribution challenges in rural and inner-city areas. Many reasons have been cited for the reluctance of physicians to practice in these underserved areas:

- The professional practice environments in rural and inner city underserved areas lack the collegial and institutional linkages physicians are trained to expect, and physicians often experience professional isolation.
- Higher than normal numbers of residents of these underserved areas are uninsured, reducing the potential income of physicians, many of whom have graduated with substantial debt loads.
- Rural areas, in particular, typically lack conventional physical and cultural amenities.
- Many rural areas lack other sources of employment, making it difficult for spouses of practicing physicians to engage in meaningful employment.

A close examination of career choices of U.S. medical school graduates indicates some important differences in patterns of practice choice. Physicians who enter primary care disciplines, especially those in family practice, are much more likely to practice in underserved areas than their peers who enter subspecialties. Some family medicine programs have two years of rural training.

Financial interventions in the medical education system by both public and private sectors are credited with success in increasing the numbers of physicians practicing in underserved areas. Government programs authorized under Title VII of the Public Health Service Act, in particular, have a successful record of training primary care physicians who choose to practice in rural and underserved areas.⁵ Other programs that deliver care to the underserved and offer incentives to physicians who provide that care have made a difference, such as the National Health Service Corps, the Community and Migrant Health Program, and targeted incentives through Medicare and Medicaid. The scope of these programs, however, remains limited, and significant physician maldistribution remains.

Entangled in the issue of geographic maldistribution is the issue of health insurance. From its earliest deliberations, the Council has proposed that the most direct and efficient means to improve access for underserved populations is to (1) assure they have health insurance coverage, and (2) establish focused programs that send health professionals to places with insufficient providers. In the absence of universal health insurance coverage, however, the Federal Government will need to increase its funding for disproportionate share coverage and for programs that make up America's medical care safety net. COGME further recommended that managed care plans for Medicaid beneficiaries be required to enter into contracts with established community clinics and associated health care providers located in shortage areas. The Council also saw a continued role for preceptorship programs in shortage areas, loan repayment support to physicians in exchange for service, differential reimbursement incentives, and efforts to improve community support, all of which were recommended in COGME's First Report (1988).

Congress, in virtually all of its recent legislative initiatives [Balanced Budget Act of 1997; Balanced Budget Refinement Act of 1999; and Medicare, Medicaid, and State Children's Health Insurance Program (SCHIP) Benefits Improvement and Protection Act of 2000], has incorporated provisions that provide exceptions or payment enhancements for hospitals training residents in rural areas. These provisions are consistent with COGME's recommendations to increase the physician workforce in these areas. Data show that residents are more likely to practice in or near areas in which they receive their training.

Physician maldistribution remains a severe and persistent problem in America, with no one effort likely to lead to the solution. Medical education can contribute through collaborative attempts at curricular change. The greater need is to resolve the substantial financial barriers to care in underserved areas and to find ways to improve the professional practice environment of physicians who work in underserved communities.

MINORITY REPRESENTATION IN THE PHYSICIAN WORKFORCE

COGME has maintained consistently that a diverse physician workforce is crucial. The goal of greater minority representation in medicine has become increasingly difficult to achieve because some of the proposed remedies, such as selective admissions policies, have

lacked broad public support and, more recently, have been constrained by legal decisions. In the First and Second Reports (1988, 1990), COGME noted that minority physicians were more likely to practice in underserved areas with high percentages of minority populations, but that the proportion of minorities in medicine had plateaued, even as it was increasing in the general population. The Council urged that the racial/ethnic composition of the physician population reflect the overall population's diversity for two reasons: (1) to assure improved access to care by the underserved, many of whom are minorities, and (2) to assure that minorities have equal access to careers in medicine.

The problem of recruiting minority students into medical schools was seen as linked directly to poor early academic preparation, insufficient encouragement, and lack of financial resources. COGME recommended creative and vigorous efforts at the high school and college levels to encourage students to pursue careers in medicine. Specifically, consortia of medical schools, public schools, and community organizations should be established to work together to improve the educational pipeline.

COGME made extensive recommendations including consideration of alternatives to the traditional use of standardized test scores and grade point averages for admission to medical schools and residency programs. In addition to recommending the availability of scholarships and loans, the Council urged partnerships with national and local media and advertising companies to produce media and materials aimed at minority children describing opportunities in science and health careers.

The prohibitively high cost of a medical school education contributes to minority underrepresentation in the physician workforce. The Council urged that Federal funding priority be given to medical schools and teaching hospitals that have demonstrated success in recruiting and retaining underrepresented minority students. Financial assistance in the form of public and private sector scholarship and loan programs should be expanded to include all levels of medical education. The National Health Service Corps should be expanded to allow targeted opportunities for minority students.

Of continued concern is the underrepresentation of minorities on the faculties of U.S. medical schools, resulting in few minority role models and mentors for minority students. Figures from the Association of American Medical Colleges (AAMC) in the year 2000 indicate that Native Americans, Blacks, Hispanics, or

Latinos comprise only 6.2 percent of faculty in U.S. medical schools.⁶ The Council recommended that the Federal Government support programs that encourage minorities to pursue careers in academic medicine and provide incentives to medical schools that are successful in recruiting and retaining minority faculty.

COGME Research on Minorities

The issue of minorities in medicine was revisited in great depth in COGME's Twelfth Report (1998). In the early 1950s, African-Americans, Native Americans, and Hispanics comprised less than three percent of graduates from U.S. medical schools. By 1998, the proportion of graduates from these three groups had increased to almost 15 percent. Yet, many minorities remained critically underrepresented at every level of medicine. For example, the 1997 figures indicated that Black Americans, American Indians/Alaska Natives, and all persons of Hispanic origin represented approximately 23.6 percent of the population, while these groups represented only 12.2 percent of students in allopathic medical schools.⁷

Minority populations are the fastest growing segments of the U.S. population. Current U.S. Census Bureau projections suggest that the percentage of minority groups will rise from the year 2000 Census figures of 28.6 percent to make up 32.7 percent of the population by the year 2010 and 47.2 percent by the year 2050. The Hispanic population, the fastest growing component of the population, is expected to increase from 11.9 percent in 2000 to 14.6 percent in 2010 and 24.3 percent in 2050.⁸ Minorities, particularly Black Americans, Mainland Puerto Ricans, Mexican Americans, and American Indians/Alaska Natives, also have among the poorest health status in the country.

The Council emphasized that greater numbers of minority physicians need to be enlisted into the workforce because data indicate they are more likely than non-minority physicians to provide care to minority, poor, underinsured, and uninsured people.⁹ Recruiting more minorities into the health professions is seen as one way of decreasing the marked health disparity of minorities in this country.

Cultural Competency

The Council has emphasized equally that all physicians need to become culturally competent. Physicians must learn appropriate communication skills, understand the health beliefs of particular minority groups, and understand the barriers and biases that limit health

care access. The Council urged medical schools, residency programs, medical specialty organizations, and continuing medical education programs to incorporate the development of cultural competency as an essential element of their curricula. Similarly, the National Board of Medical Examiners and specialty board certification and accreditation bodies were urged to review examinations for assessment of cultural competency and make appropriate revisions to their testing measures.

In 1999, the Accreditation Council for Graduate Medical Education endorsed a professionalism competency for residents to demonstrate sensitivity to patients' culture.¹⁰ HRSA's Bureau of Primary Health Care, in collaboration with other Government agencies, published a document directed to health professionals focusing on Hispanic culture.¹¹ The document seeks to build physician-patient communication to provide health care to Hispanic patients.

Private and Public Initiatives

In the last decade, COGME was not alone in addressing the problem of underrepresentation of minorities in medicine. In 1991, the AAMC launched its *Project 3000 by 2000* initiative to increase underrepresented minority enrollment in U.S. medical schools. The project led to the Health Professions Partnership Initiative (HPPI). The primary goal of HPPI was to improve student achievement to enable more minority students to progress through the health professions education pipeline. The HPPI worked in partnership with The Robert Wood Johnson Foundation and the W. K. Kellogg Foundation to award grants aimed at increasing the participation of minorities in medicine, nursing, and other health professions.

Since *Project 3000 by 2000* began, medical schools have reversed the minority enrollment trend of previous years. Between 1991 and 1994, underrepresented minority applicants and matriculants to U.S. medical schools increased by 40 percent and 27 percent, respectively. Through HPPI, the AAMC collaborates with other health professions schools and graduate health science programs to increase minority representation.¹²

In addition to this important AAMC initiative, several influential documents have been published in recent years, including The Institute of Medicine's *Balancing the Scales of Opportunity: Ensuring Racial and Ethnic Diversity in the Health Professions* (1994), and the Pew Health Professions Commission's *Critical Challenges: Revitalizing the Health Professions for the Twenty-First Century* (1995). Congressional action on this subject also led to numerous Federal

Government-sponsored initiatives to increase minority participation in health science and medical careers: Title VII, Section 740 programs in HRSA, and Title III, Section 338 programs in the National Institutes of Health. Many of these private and public efforts were addressed in COGME's Twelfth Report (1998).

While medical schools across the country continue their efforts to attract and retain minorities, their results have not been satisfactory. Out of an entering class of approximately 16,000 students, slightly more than 1,900 students from underrepresented racial/ethnic groups (less than 12 percent) were enrolled as first-year students in the academic year 2000-01.¹³ Given that underrepresented minorities comprise more than 20 percent of the Nation's population, greater efforts are needed to address the disparity.

INTERNATIONAL MEDICAL GRADUATES IN THE PHYSICIAN WORKFORCE

Any analysis of the relative adequacy of the Nation's physician workforce requires a careful examination of the services provided by international medical graduates (IMGs). Because of changing workforce needs, COGME's recommendations regarding the complex issue of IMGs have varied over its history. In the Eleventh Report (1998), the Council noted continued growth in the number of residency positions despite its "110:50/50" recommendation. COGME believed that this growth was driven by an increasing demand for residents by teaching hospitals, fueled in part by Medicare payments for residency training and by an ample supply of IMGs to fill residency vacancies.

While the number of U.S. medical school graduates (USMGs) entering GME each year remained largely fixed, the number of IMGs entering training increased markedly. In part, this rise in IMGs was due to decades of change in immigration laws, regulations affecting the exchange visitor program, and complexities of temporary and permanent visas.

Many IMGs are in the U.S. because they are permanent residents. Most of the increase in the total number of IMGs has been due to the large number of foreign-born IMGs entering residency programs with temporary J-1, J-2, and H-1B visas. A substantial number of IMGs participating in residency programs under the auspices of the exchange visitor program (temporary J-1 visa holders) are able to secure waivers to their "return home" requirement by agreeing to serve in

health professionals shortage areas (HPSAs). A high percentage of J-1 exchange visitors who do return to their home country ultimately return to the U.S.

As applied to an alien physician graduate of a foreign medical school, an H-1B visa allows admittance for temporary employment to perform medical services, contingent upon passing an examination. The alien physician must be sponsored by a U.S. employer and is limited to a three-year stay, renewable for an additional three years. Under this visa, the physician may petition for an adjustment to become a legal permanent resident, thereby increasing the ranks of the Nation's physician workforce.

Intent of Exchange Visitor Program

The original intent of the exchange visitor program (authorized by the U.S. Information and Educational Exchange Act of 1948) was to strengthen international relations and further mutual understanding by exposing the visitor to U.S. culture and providing training in the latest technology available in the U.S. The maximum duration that an alien physician may remain in residency training is seven years, although this time may be extended under special circumstances. During this time, the individual becomes acculturated to U.S. society and may develop expertise in specialties or subspecialties beyond that appropriate or suitable for the technology available in the physician's home country. These factors often induce the physician to seek to remain in the U.S.

The waiver program, especially with the passage of the "Conrad Amendment," provides a vehicle that allows IMGs to remain.¹⁴ The number of service and research-related waivers granted for exchange visitor physicians, according to the Department of State, amounted to nearly 5,000 in the three years prior to 1999. The number of such waivers granted from 1991 through 1995 was 3,742. The large number of individuals who successfully obtain waivers has led to a concern that the U.S. may be depriving other countries of the benefits of the medical training and expertise acquired by these individuals during their education in this country.

Reducing the Aggregate Total of Physicians Entering the Workforce

In the Eleventh Report, COGME (1998) maintained the importance of reducing the number of physicians entering GME, and ultimately the physician workforce. Unlike earlier recommendations to reduce Medicare

payments to teaching hospitals for IMGs (Seventh Report, 1995), this report suggested that any policy to provide Medicare GME funding to USMGs alone would be fraught with legal problems if it discriminated against IMGs who are either naturalized U.S. citizens or permanent U.S. residents. Consequently, the Council issued new recommendations designed both to reduce the number of GME positions and to modify the exchange visitor program.

COGME recommended that Medicare GME payments be available only to those residents expected to become part of the U.S. physician workforce. Therefore, the Council called for eliminating both Medicare direct GME and indirect GME (IME) payments for new exchange visitor (J-1 visa) residents and using alternative funding sources such as home country financing or foreign aid.

The Council recommended that the granting of J-1 waivers for purely service reasons be phased out over a four-year period in order to restore the exchange visitor program to its original purpose. After training, J-1 visa physicians should be required to live in their country of nationality or country of last residence for five years, instead of two years, before they could return to the U.S. The H-1B visa program for physician residency training should be eliminated because it has been used to circumvent the J-1 visa "return home" requirement. COGME further recommended that the Federal Government cease to provide loan support to U.S. students engaged in undergraduate medical education in foreign countries.

Role of IMGs in Care to the Underserved

In its Eleventh Report (1998), COGME recognized the role of international medical graduates (IMGs) in providing health care in underserved areas of the country. Data showed that IMGs, compared with USMGs, consistently fill gaps in the physician workforce in counties having poor scores on a number of health status and economic indicators such as infant mortality rate, per capita income, designation as a health professionals shortage area, non-metropolitan population, and physician-to-population ratio. The Council concluded that curtailment of GME support for IMGs might necessitate policy initiatives to replace IMGs with USMGs in locations and institutions with underserved populations.

Workforce planning would certainly need to address the changing health care landscape in many major urban centers where a high proportion of IMGs provide primary care services. The most recent data available

indicate that nearly 81 percent of IMGs are providing patient care.¹⁵ Of this group, 11.2 percent are in the specialty of family practice or general practice, 26.3 percent are in internal medicine, and 10.5 percent are in pediatrics. More precise data are needed, however, to indicate the exact number of IMGs serving in specific underserved areas and for what duration.

Concern about IMGs in the physician workforce has diminished with the decline in number of exchange visitor J-1 physicians entering residency programs. In 2000, U.S. citizens and U.S. permanent residents constituted about 50 percent of PGY1 positions compared to 42 percent in 1993.¹⁶ The initiation in July 1998 of the clinical skills assessment examination (CSA) by the Educational Commission for Foreign Medical Graduates (ECFMG) was thought by some to accelerate the decline in the number of exchange visitor physicians. The need to arrange to take the CSA in Philadelphia, Pennsylvania, the only site where it is administered, and the examination cost of \$1,200 (in 2001) were viewed as constraints. Recent evidence suggests little or no adverse impact on the number of IMGs being certified by the ECFMG because of the implementation of the CSA.

It is noteworthy that IMGs are willing to accept positions in the National Residency Match Program (NRMP) not filled by U.S. medical school graduates, many of them in primary care specialties. This acceptance is particularly evident in major primary care disciplines. U.S. medical school graduates matching in family practice peaked at 2,340 in 1997, and then progressively declined to 1,503 in the 2001 NRMP.¹⁷ Although the total match rate has declined appreciably since 1997, the approximately 36 percent of positions filled by IMGs entering family practice prevented an even greater erosion in the fill rate than otherwise would have occurred. Similarly, figures for the year 2001 indicate that IMGs comprise 36 percent of residents in general internal medicine.

WOMEN IN MEDICINE

Medical schools began changing their admission practices with regard to women applicants in the mid-1970s when overall numbers admitted to medical school were doubled because of Federal incentives to address a potential physician shortage. By the 1990s, there was a significant increase in the number of women graduating from medical school, completing residencies, and entering the physician workforce. COGME's Fifth Report, *Women and Medicine* (1995), found that

the percentage of women in the entering medical school class continued to rise after 1970, so that women comprised 46.0 percent of entering and 44.6 percent of all medical students in the 2000-2001 academic year.¹⁸ The number of women physicians was projected to rise to almost 200,000 (29 percent of all physicians) by the year 2010, up from approximately 25,500 in 1970 (8 percent). Workforce analyses found minimal differences in working hours between men and women physicians.

In terms of specialty choice, women physicians tended to cluster in primary care disciplines. About 60 percent of all women practiced in five specialties: family practice, internal medicine, obstetrics-gynecology, pediatrics, and psychiatry. Rates of increase in representation of women within academic medicine have been much slower. When the Fifth Report was released in 1995, women represented only ten percent of full professors, four percent of department chairs, and three percent of medical school deans. As of December 2000, the percentage of new women faculty had risen to 37 percent from 32 percent in 1997.¹⁹ Women still represented only 12 percent of full professors, 7.5 percent of department chairs, and 3.25 percent of medical school deans.

The Fifth Report made a number of recommendations to help assure that women physicians achieve their full potential in academic leadership positions and in all specialty areas. COGME emphasized the importance of women physicians having access to adequate childcare, alternatives to allow for childbearing and child rearing without penalty, and flexible education and work schedules.

The Fifth Report also examined women's health status and its implications for the training of physicians. The report noted that women's overall health status is worse than for men in terms of disability, morbidity, and chronic disease. Physicians need to have a broad understanding of conditions affecting women and competency in caring for women as they move through cycles of health and illness that are different from men. The incomplete and poorly coordinated care that women often receive has been attributed to inadequate health insurance (women are twice as likely as men to be underinsured), fragmented delivery of primary care services, and deficiencies in physician training.

The status of women's health also will be influenced by demographic shifts. As the population of older Americans continues to grow, women will continue to outnumber men, and therefore, disproportionately face the illnesses and conditions specific to the elderly. Also, women in certain minority groups are known to have a

lower life expectancy, more health problems, and poorer access to care than white women, which will require a significant response from the Nation's health care system. National Medical Ambulatory Care Survey data indicate that women physicians can play an important role in addressing this problem, as they are more likely to treat larger percentages of women in their practice, and are practicing increasingly in obstetrics-gynecology.²⁰

IMPROVEMENTS IN MEDICAL EDUCATION

The readiness of physicians to meet the health care needs of the Nation is largely dependent on the medical education they receive. The medical education system must continually monitor itself and make improvements if it is to provide training appropriate to future physicians. In its Sixth Report (1995), COGME noted that physicians deliver care increasingly to defined populations of patients in the context of integrated delivery systems or health plans. The report stressed the need for educational programs to produce physicians with different sets of skills and new areas of knowledge than in the past. The Council issued an extensive list of recommendations calling for medical schools, residency programs, and other teaching facilities to share in the responsibility of physician training. Medical educators also need to work with managed care organizations and with certifying and accrediting organizations.

In *Preparing Learners for Practice in a Managed Care Environment* (1997), COGME described needed changes in medical education to prepare future physicians for health care systems in which they are likely to practice. The paper, while specifically focusing on practice in managed care settings, identified physician competencies that are useful in a variety of practice settings.

Noting that the curricula of undergraduate and graduate medical education should not be viewed in isolation, this report describes learner needs across the continuum from pre-medical education to residency training and to life-long learning. A central premise is that physicians need to understand populations and to care for patients within the context of the settings in which they function. Competencies described in the paper, along with appropriate teaching strategies, include health systems finance, economics, organization and delivery; evidence-based and epidemiologically-based medicine; ethics; development of patient-provider relationships; leadership in promoting teamwork and organizational change; quality measurement and improvement; medical informatics; and systems-based care.

Training in Community Settings

Spotlighting community health, COGME issued its Thirteenth Report, *Physician Education for a Changing Health Care Environment* (1999), which encouraged fresh approaches to the professional education of physicians. The report suggests a wide array of changes in teaching programs applicable not only to primary care disciplines, but to all specialty and subspecialty areas. The major theme is that comprehensive preparation of all physicians requires experiences in both traditional and community settings. The practice environment becomes the education environment. A medical school education requires high quality, community-based clinical opportunities, and a faculty that includes community-based clinical teachers. Clinical teaching sites need to demonstrate the highest standards of clinical practice and represent the type of environment in which graduates will practice eventually.

Physicians and Public Health

There is also a crucial need to enhance the education and training of the physician workforce in public health and preventive medicine. Practicing physicians must be capable of addressing public health needs and national goals and must be able to interact effectively with local public health agencies and officials to deal with emerging health issues and problems. Background research performed by COGME in 2000 indicated that the number of public health physicians was decreasing, salaries remained inordinately low, and overall resources for public health were inadequate. There has been no systematic investment aimed at improving the Nation's public health system to assure its capability to provide essential public health services.

COGME's recommendations and concerns are particularly timely in view of recent heightened national concerns about terrorism. It is clear that an effective, coordinated response to the threat of bioterrorism or the spread of emerging infections requires a strong public health infrastructure. Such a structure must be capable of communicating effectively with knowledgeable, practicing physicians, who must identify, report, and manage urgent public health problems affecting their individual patients.

Educating Physicians for Changing Roles

As the health care environment changes and becomes ever more complex, medical education needs to change its curriculum, teaching methodologies, and

approaches to evaluation. Innovative strategies and new resources are needed to prepare students and residents for future roles.

As the patient population becomes more diverse, the education of physicians requires more attention to effective communication skills, cultural competency, patient advocacy, conflict management, and ethical decision-making. Future physicians need to learn how to work in teams and to communicate effectively with colleagues and administrators.

As more learning experiences shift to the community, medical schools need to take advantage of distance learning techniques to deliver educational programs. The role of information technology and the implications of patients' increased use of the Internet and e-health resources need to be explored. Accountability requires that programs evaluate both short- and long-term outcomes for learners, teachers, and educational programs. Assessment techniques must be valid and reliable across a variety of teaching environments.

Given the rapidity of change in medical practice with new advances in knowledge and skills, future physicians need to practice evidence-based medicine using the most valid and timely information available. They must be prepared to assume the role of lifelong learners if they are to provide competent care throughout their years of practice. In fact, assurance that physicians are maintaining their knowledge and skills has been built into all medical boards that now require physicians to meet re-certification criteria.

FINANCING GRADUATE MEDICAL EDUCATION

In its reports COGME has sought to provide a balanced and comprehensive view of key issues and alternatives in the debate of how GME should be financed. Recent changes in the health care delivery system associated with the growth of managed care and increased competition within health care markets have had major implications for how GME programs are operated and financed. GME is funded through a variety of mechanisms including the Medicare program. In most States, Medicaid programs also make explicit payments to teaching hospitals for the cost of GME. Changes in Medicare and Medicaid funding for GME have added to the financial pressures on teaching hospitals. The uncertainties of continued reliance on Medicare, Medicaid, and private pay revenues reinforced the idea for COGME that GME financing reform is necessary.

Financing and Workforce Planning

As the Council issued recommendations regarding the numbers of enrollees in graduate medical education and their primary care physician/specialist mix, it also proposed financial incentives to meet priority workforce goals. At the time of COGME's Sixth Report (1995), it was believed that the growth in managed care would likely result in decreased financial support for undergraduate and graduate medical education. COGME urged the Federal Government to continue its Medicare direct and indirect medical education payments (direct GME and IME) for all residents who are graduates of U.S. medical schools, but gradually reduce payments for IMGs. Recommendations were made to up-weight direct GME and IME payments for primary care training and down-weight payments to subspecialist training programs. COGME recommendations also highlighted the importance of community-based experiences in physician training. Implementation of these recommendations would provide payments for teaching in non-hospital settings and allow funding to follow residents to their sites of training.

COGME believes it is vital that a stable and equitable source of long-term financing for GME be established in which all payers share the costs of physician training. As early as the Third Report (1992), the Council urged an all-payer system to finance GME, which would spread equitably the costs of preparing a well-qualified physician workforce across all payers. Similarly, the Fourteenth Report (1999) underscored COGME's belief that GME is a public good that benefits the whole Nation. The Council also expressed its concern about the increasing fiscal pressure placed on teaching hospitals and ambulatory sites by a competitive marketplace and the drive for managed care plans and other payers to cut their expenses.

Fiscal Health of Teaching Hospitals

Of continuing concern is the severe financial plight of teaching hospitals, particularly academic health centers. Such centers provide many related public goods that add substantially to their costs, including care for the uninsured, research, teaching of medical students and other health professionals, and the development and testing of medical innovations. As safety net providers, these institutions have less negotiating leverage with managed care plans and other payers. They rely on physicians in training as important providers of care. To the extent that the competitive marketplace reduces GME reimbursement without a concomitant increase in funding for services to uninsured patients, the fiscal

viability of teaching hospitals is endangered, placing in jeopardy the training of physicians and care for the uninsured.

The Balanced Budget Act

Of great significance to the issue of GME financing was the passage of the Balanced Budget Act (BBA) of 1997, which has been discussed in a number of COGME publications. The BBA of 1997 was the first major overhaul of Medicare GME policy since the early 1980s. Medicare payment policy at the time was poorly aligned with the Nation's workforce requirements. By design, it encouraged an oversupply of residents and physicians, especially subspecialist physicians.

The BBA of 1997 sought to balance the Federal budget by 2002 and contained a number of provisions that affected GME. Since Medicare constitutes the largest Federal source of expenditures for GME, this legislation had the potential of profoundly affecting GME and the physician workforce. One provision was designed to control the continued growth of GME positions. This control was to be accomplished by: (1) capping the total number of residents in hospitals who were funded by Medicare, (2) reducing the IME intern/resident-to-bed ratio (IRB) adjustment factor, and (3) capping the IRB adjustment factor. The BBA, however, had an unintended adverse effect on the capability of family practice residency programs to increase the number of rural residency positions.

The BBA of 1997 authorized the phased carve-out of GME dollars from Medicare payments for Medicare+Choice enrollees.²¹ The dollar value of this carve-out, according to estimates by the Health Care Financing Administration, would reach \$2.6 billion for fiscal year 2002. In its Fourteenth Report (1999), COGME argued that the Medicare carve-out was an opportunity for the Nation to support health workforce priorities. Reference was made to 19 States that carve out a GME portion of Medicaid managed care payments and distribute funds to teaching hospitals in order to achieve State workforce policy goals. The report recommended that the Federal Government collaborate with States in building the expertise and capacity for workforce planning and study.

Teaching hospitals, specialty organizations, and rural health providers all made claims of adverse effects under the provisions of the BBA. Because of the many outcries, COGME commissioned a staff resource paper examining the GME provisions of the BBA and their consequences, *The Effects of the Balanced*

Budget Act of 1997 on Graduate Medical Education: A COGME Review (2000). In its report, COGME noted that the BBA removed some incentives for continued growth in the number of residents and provided incentives for training in non-hospital settings. The legislation, however, produced unintended consequences that would financially hurt many teaching hospitals.

In response to such criticism, the Balanced Budget Refinement Act of 1999 (BBRA) was passed to provide payment adjustments under Medicare for BBA relief. The BBRA revised the multi-year reductions of IME payments, slowing their reduction beginning in the year 2000. In addition to providing a measure of fiscal relief to teaching institutions, the BBRA accorded flexibility to rural and other areas. Provisions allowed hospitals to increase the number of primary care residents countable in the base year limit and permitted reclassification of certain hospitals as rural hospitals. Subsequent to the BBRA, further legislative relief was provided via the Medicare, Medicaid, and SCHIP Benefits Improvement and Protection Act of 2000 (BIPA). Because of the legislation, the reduction in the IME Medicare adjustment factor was moderated.

Continued COGME Support for GME Reform

COGME again addressed the topic of GME financing in its Fifteenth Report, *Financing Graduate Medical Education in a Changing Health Care Environment* (2000). The report explored alternative financing policies that would enhance support for clinical training in approved residency programs for students who have graduated from schools of medicine, osteopathy, dentistry, and podiatry. The major training sites for this type of training are teaching hospitals that provide training for the approximately 100,000 residents in 8,000 different residency programs in inpatient settings, ambulatory clinics of teaching hospitals, and community-based sites.

GME payment policies and alternative models for financing reform, especially in light of the increasing importance of ambulatory care educational experiences, are described in the Fifteenth Report. A central recommendation is the creation of a GME fund that would combine Federal funding with all-payer funds for GME in order to support high quality training of an appropriately sized physician workforce. IME accounts would pay hospitals and other clinical training sites for the indirect costs of educational activities. Direct GME accounts would pay program sponsors or their designees

for the direct costs of GME, and a national average per resident payment would be established.

The Council recommended the continuation, with some modifications, of the limits on resident numbers as set in the BBA. Caps would be applied to sponsoring institutions rather than hospitals. Residents in non-hospital settings would be included and adjustments would be allowed in the limits to improve physician workforce distribution. An account would be established for funding special programs directed at building high quality community-based training capacity or achieving specific workforce goals. Additional support would be provided for hospitals and community-based training sites that serve a disproportionate share of low-income patients.

The Fifteenth Report also recommended that Medicare rules moderate the requirements for documentation of care expected of attending physicians. Because current methods of graduate medical training involve proctored viewing and guided manipulations, it is imperative that clinical attending physicians (attendings) spend as much time in the direct development of clinical skills in their trainees as possible. As attendings make rounds to see patients and review patient status with residents, they verify by their signature that charted information is correct and sufficient to be useful; this process, regularly subject to hospital audit, has been efficient and effective in transforming physician trainees into functional graduates. COGME was concerned that requiring attendings to write a separate note of findings is counterproductive to the GME process. Such excessive documentation detracts from the time that attendings have to teach the graduates and detracts from patient care.

Assuring Public Debate on GME Financing

COGME recognized that some of its recommendations would be contentious. The Fifteenth Report, COGME's first in-depth analysis of GME financing, reiterated previous COGME proposals for major reform to provide sufficient, stable funds for GME that would distribute fairly the cost of training across all payers. COGME also recommended that GME funds be used as financial incentives to address workforce issues. COGME intended the report to serve as a stimulus for discussion in the emerging debate on financing GME. As such, the Council followed up the release of its report by hosting a Stakeholders Meeting in which affected parties were invited to present their perspectives in a series of panels. The meeting was held April 11,

2001, in conjunction with a two-day COGME meeting. Attending panelists represented academic medicine, organized medicine, residency accreditation, and specialty medical societies. A consensus appeared likely with regard to four conclusions of the Fifteenth Report:

- Medical education is a public good.
- GME is primarily an educational activity.
- Funding GME by all payers is a desirable goal.
- It is appropriate to use GME funding to implement workforce goals.

In order to publicize the ideas expressed at the Stakeholders Meeting, COGME published the transcript, with minor editing, *Proceedings of the GME Financing Stakeholders Meeting: Public Response to COGME's Fifteenth Report (2001)*.

Several States have been addressing ambulatory care financing issues (e.g., Michigan, Tennessee, New Mexico, Minnesota, West Virginia). Professional organizations, especially those involved in primary care (e.g., American Academy of Family Physicians, American Academy of Pediatrics, American College of Physicians, American Society of Internal Medicine), have also indicated interest in the recommendations.

THE CHANGING NATURE OF HEALTH CARE IN AMERICA

The Nation's system of health care is experiencing rapid and widespread change. Changes in demographics and the health care environment will create a new context for future COGME analyses and recommendations.

AGING OF THE U.S. POPULATION

People 65 years of age and older represent the fastest growing segment of the U.S. population. Many new needs are thus created for the health care system, including the need for more providers to care for a wide variety of health needs of the elderly. While many patients have chronic diseases that require treatment, a growing segment require acute care for conditions often related to their more active lifestyles. For example, more of the aged population have healthier cardiovascular systems than previous generations and sustain exercise-related injuries requiring care.

INCREASING DIVERSITY OF THE U.S. POPULATION

By 2010, 32 percent of the U.S. population will be African American, Asian, Hispanic, or Native American. In California, these groups already comprise more than 50 percent of the population; 44 percent of the Los Angeles population is Hispanic.

RISING HEALTH CARE COSTS

After years of cost containment, health care costs have resumed a rate of increase that far exceeds the rate of inflation for the rest of the economy (7.2 percent, with nearly half of the increase accounted for by hospital costs).²² Pressures to achieve high efficiency in all practice settings limit the amount of faculty time available for uncompensated teaching of medical students and residents, and limit space for optimum teaching.

SHIFT OF CARE FROM HOSPITALS TO AMBULATORY SETTINGS

Fewer illnesses are managed in hospitals, and, for those that are, lengths of stay are briefer than in the

past. Hospitalized patients now typically have illnesses that are more severe and complex, entailing greater intensity of care.

The shift in care from the inpatient to the outpatient setting has had several impacts:

- Increased complexity and severity of patients in the hospital have resulted in an increased cost per patient.
- Financial stress on hospitals has increased due to the cost cutting forced by managed care contracts. This phenomenon has been especially critical for urban hospitals, many of which have had to close.
- GME financing has been based on the assumption that training will occur in hospitals and reimbursement will depend on the number and mix of hospital inpatients. In fact, GME training takes place increasingly in outpatient settings. The GME paradigm needs to recognize this change.

UNPRECEDENTED, RAPID SCIENTIFIC AND TECHNOLOGICAL ADVANCES

IN THE BASIC SCIENCES:

- Dramatic scientific advances are providing new, often highly costly options for pharmacotherapy through application of biotechnology and new methods for drug design and discovery.
- Applications of genomics promise to effect major changes in approaches to health care.

IN THE APPLIED SCIENCES:

- Technological innovations have created new areas of medicine while profoundly changing workforce needs (e.g., interventional radiology, minimally invasive surgery).
- Databases and other computer-based tools have the potential to place current knowledge at clinicians' fingertips, improving the quality of care, reducing errors, and facilitating collaborative health care. Though clinicians increasingly have access to such

“just-in-time” information, professional education still emphasizes memorization of facts more than improving the facility of students, trainees, and practitioners to use new technology to research the latest data on clinical issues and questions as they occur.

CONTINUING CHANGES IN HEALTH CARE FINANCING

Changes in Medicare, Medicaid, and Medicare+Choice have resulted in shifting greater costs to con-

sumers. Employers are shifting increasingly from defined benefit plans to defined contribution by employers. The numbers of uninsured and underinsured continue to be an issue.

THE NEW MARKETING AND CONSUMERIZATION OF HEALTH CARE

There has been an explosive growth in direct-to-consumer advertising of prescription drugs, the use of the Internet by marketers and consumers, and increasing demands for specific drugs by consumers.

FUTURE WORKFORCE ISSUES REQUIRING COGME DELIBERATIVE STUDY

In its monitoring and advising capacity, COGME anticipates a number of physician workforce and GME problems that will require attention in the future. Some of the problems are new. Others have been studied by COGME in the past, but because of their complexity, persistence, and significance to the Nation, they merit continued study in a search for solutions that fit the changing context of health care in America.

PHYSICIAN WORKFORCE

As part of its on-going function to study this country's physician needs and supply, COGME believes it is time to revisit its earlier "110:50/50" recommendation, which speaks to the number of graduate medical education (residency) positions that should be funded and the optimum ratio of primary care to non-primary care physicians.

In addition, the shifting demographics of the population needing health care services should receive scrutiny. Many attributes of the current demographics of society, for example the increased numbers in the population of racial and ethnic minorities, need to be considered by educators and policy makers. In 1999, 28 percent of the U.S. population belonged to a racial/ethnic minority group. The U.S. Census Bureau projects that by 2020 this will increase to 40 percent of the U.S. population.²³ Changes in the infant, child, adolescent, and young adult population have outstripped early projections. For example, there has been an increase in the Hispanic birth rate and an influx of minority children as a result of burgeoning immigration. The number of Hispanic children has increased from 9 percent of the child population in 1980 to 16 percent in 2000. By the year 2020, it is projected that more than one in five children in the U.S. will be of Hispanic origin.²⁴ In addition to an increase in raw numbers, this population has also added to the numbers of underserved individuals. Demographics, unmet health care needs, language barriers, and patient and parental satisfaction with health care are but a few of the factors that call for an ongoing assessment of physician workforce needs.

The aging of the population and the needs of the chronically ill are new factors to be considered. What is the optimum mix of providers to deliver efficient, cost-

effective, high quality care to such patients? Current evidence addressing such questions is extremely limited and many alternative models for care exist. One model assumes that broadly educated primary care physicians with training in geriatric medicine will provide the bulk of care. It has been suggested by some experts that subspecialists with broad experience in each patient's major chronic illness would be better able to provide high quality "primary care" for such patients. Answers to these questions must be pursued.

THE SPECIALTY PHYSICIAN WORKFORCE

A broad range of anecdotal reports suggesting shortages of certain selected types of specialists has prompted COGME to begin to assemble data on the specialty workforce. The aging of the population, referenced above, speaks to the need for physicians trained in geriatric medicine. The pediatric population, which declined in the 1970s and 1980s following the "baby boom," experienced an increased rate of growth beginning in 1990.²⁵ This growth poses challenges as the overall number of pediatricians entering subspecialties (e.g., pediatric nephrologists, pediatric rheumatologists, etc.) has declined. The influence of debt load on specialty and subspecialty choice, as well as family obligations, long-term earnings potential, the job market, and other factors require further assessment. Data from certain studies provide valuable, if incomplete, insights into these issues. For example, a recent survey of residency program graduates in the State of New York offers a picture of how new practicing physicians view the marketplace and choose from among the range of available primary care and specialty options.²⁶ The data also suggest a softening in demand for primary care physicians.

EFFECT OF PRIMARY CARE PROVIDERS OTHER THAN PHYSICIANS ON HEALTH CARE

Health care providers other than physicians frequently provide direct patient care. Nurses, advanced practice nurses, and physician assistants are greatly

increasing in numbers, outstripping the growth of the physician workforce. It is estimated that there will be 125,000 practicing nurse practitioners and at least 68,000 physician assistants by the year 2010.²⁷ Direct collaboration in patient care among physicians and other providers is becoming increasingly common.

Based on the 1995-1999 National Ambulatory Medical Care Survey data, about one-fourth of office-based primary care physicians used physician assistants or nurse practitioners for about 11 percent of visits. These latter practitioners, working under the supervision of a physician, provided primary care that was similar to care provided by physicians. Does this imply a lesser need for primary care physicians or does it forecast an increase in a two-tiered system of health care, wherein cost and access determine the availability and/or quality of services? More likely, the growth in the non-physician workforce calls for a reassessment of the "traditional" models of health care delivery.

As outlined in the first joint report by COGME and NACNEP (1995), future assessment of needs for a primary care provider workforce must include consideration not only of physicians, but also of providers from other disciplines. This recommendation led to the development of an Integrated Requirements Model by the Bureau of Health Professions, Health Resources and Services Administration (HRSA), for its health workforce analyses.

The roles of providers other than physicians, and the degree to which they may substitute for or supplement the services of physicians, must be defined in the context of the quality and accessibility of care provided for patients with differing problems. Analyses must also consider the legal scope of practice of these other health care providers, which varies from State to State. Alternative models for the organization of patient care are emerging. COGME plans to examine these alternatives and address the effects of such emerging models on quality of care, access to care for rural and urban underserved populations, and implications for primary care and specialty physician workforce needs.

Of great importance is the renewed awareness that the quality of health care in this country can be improved when health professionals from a variety of disciplines use team-based approaches to provide that care. Questions that need exploration include:

- How should the make up of the health care team be determined?
- How should teams function?
- What kind of training do physicians need to lead and to work in teams?

GRADUATE MEDICAL EDUCATION AND UNIONIZATION

Choices in allocation of resources have fostered the development of unions to represent house staff trainees. Issues of supervision, working conditions and hours, support services, discipline, and compensation have been discussed within the context of unionization and subsequent contract negotiations. As these issues cross lines between employment and education, they bring about concerns that education, training, accountability, and patient care may be affected adversely. It is important to define these lines in order to preserve and improve the quality of education, while providing necessary protection for hospital house staff.

While these concerns have existed for some time, several factors point to a rise in unionization of medical staff in coming years. While house staff at public teaching institutions has long been able to unionize and generally has done so, the far larger proportion at private institutions has not. The 1999 decision of the National Labor Relations Board to permit unionization at private teaching hospitals could result in a considerably larger proportion of unionized house staff. In addition, there has been a trend towards unionization of individual physicians in various practice systems, as they perceive a loss of control and/or income. These issues merit close study.

ADEQUACY OF HEALTH CARE WORKFORCE DATA

A number of factors seriously constrain the ability to perform accurate analyses and to make realistic projections of physician workforce needs. The variable quality of available data places major limitations on what can be determined. The American Medical Association (AMA) Master File has provided the nucleus of information for most physician workforce studies, but it is incomplete in potentially critical areas. COGME and HRSA have been working with representatives at the AMA to design and implement improvements in this crucial database. Public-private partnerships are key to creating and maintaining quality workforce data.

CARE FOR THE UNDERSERVED

Regardless of the relative proportion of specialists and primary care physicians in the physician workforce, the increasing health care needs of the aging U.S. population and its increasing diversity undoubtedly will exacerbate an array of existing problems. The situation of underserved populations will worsen as the prevalence

of chronic diseases increases. Likewise, underrepresentation of minorities among health care professionals will only become more acute if the proportion of minorities in the general population continues to outstrip the proportion of minority graduates from health professional schools and training programs.

An important question is whether we should continue to depend upon international medical graduates to provide a major proportion of care for underserved populations. If not, what new steps will be necessary to reverse these and other worrisome trends? The population of uninsured and underinsured in the United States has risen since the 1970s. Assuring their access to care and the maintenance of the health care safety net will remain a crucial issue. Rising costs seem likely to place severe constraints on the resources available to address these problems.

CHANGING MODELS OF INSURANCE AND PHYSICIAN WORKFORCE NEEDS

It is also apparent that the structure of health insurance will continue to change. Though there are major regional differences in insurance models, in general, closed-panel, capitated managed care models are dwindling in number, and open-ended, point-of-service plans are becoming more common. The rise in managed care and its initial emphasis on the primary care physician as “gatekeeper” resulted in a period of increased demand for primary care physicians and decreased demand for specialty and subspecialty physicians. More recently, pressure from negative public reaction to restrictive managed care rules and changing insurance models have eased direct access of patients to specialty and subspecialty physicians. Such changes in the marketplace have major influences on career choices of medical students and trainees in GME programs. The effects of these changes on the physician workforce composition inevitably lag because of the long periods required for education and training. As further changes evolve, COGME’s expert opinions and analyses will be essential to provide policy makers with crucial, balanced appraisals of future options.

COLLABORATION AMONG HEALTH PROFESSIONALS TO IMPROVE THE QUALITY OF HEALTH CARE

COGME plans to continue advocating close collaboration among the health professions in providing high quality care to patients. COGME has addressed relationships between medicine and nursing in reports pre-

pared in collaboration with the National Advisory Council on Nurse Education and Practice (NACNEP). Their first collaborative venture in 1995 developed an analytic approach to estimating requirements for primary care providers. The results, published in *Report on Primary Care Workforce Projections* (1995), constituted an initial attempt to broaden the bases used to estimate interdisciplinary health workforce needs. The report opened an ongoing dialogue between COGME and NACNEP, which has enabled these two advisory councils to explore the barriers to physician-nurse collaboration and create means to improve it.

The need to prevent errors in health care and improve patient safety prompted the second COGME-NACNEP collaboration. The need for action was spurred early in the year 2000 by a report of the Institute of Medicine.²⁸ The IOM report cited research indicating that adverse events occurred in 2.9-3.7 percent of hospitalizations. Moreover, medical errors, estimated to be one of the ten leading causes of death in the U.S., surpassed yearly deaths attributable to motor vehicle accidents, breast cancer, or AIDS. Recommendations emphasized the need to enhance the knowledge base about errors, create an effective reporting system, raise standards and expectations for improvement, and create safety systems within health care organizations. Emphasis was placed on the careful application of information technology, improvements in medical and nursing education, and a multidisciplinary approach to care.

Shortly thereafter, in January 2001, COGME and NACNEP issued a joint report entitled *Collaborative Education to Ensure Patient Safety*. The report noted that physicians and nurses most often practice independently, and concluded, “It is a myth that health care operates as a system.” The report highlighted the many points in the existing system that require but lack effective coordination. It noted that information systems must play a role in assisting collaborative health care teams to manage the inevitable shifts in care among patient care units, providers, and health care organizations for patients with complex illnesses. The report also noted that patients need to participate more actively in their own health care, which means that physicians and nurses have to adjust their own practice approaches to encourage patient education and participation. The report called for new standards, models, and incentives to achieve the necessary level of transformation needed for a unified system of patient care.

Two of the recommendations by COGME and NACNEP have already been implemented in the form of new cooperative agreements awarded by HRSA:

- (1) A training program to develop faculty leaders in interdisciplinary education of physicians and nurses to promote patient safety.
- (2) Development of innovative programs in interdisciplinary education to enhance specific aspects of patient safety for teams of undergraduate, graduate, and practicing physicians and nurses. These grantees will pool their data and newly devised resources with those of grantees funded by the Agency for Healthcare Research and Quality to foster the development and dissemination of successful curricula and “best practices.”

The call by COGME and NACNEP for coordinated teamwork to improve health care quality was echoed and expanded in the IOM’s follow-up report on patient safety, *Crossing the Quality Chasm: A New Health System for the 21st Century* (2001).²⁹ Rather than recommending specific organizational changes, the IOM Report broadly outlined a course for health care providers, the health care industry, insurers, Government, and the public at large to undertake. The IOM envisioned crucial roles for Government and the private sector in promoting broad-based analyses and dis-

cussion on needed changes that would be unlikely to occur if left to the marketplace. The lead recommendation was that:

A multidisciplinary summit of leaders within the health professions should be held to discuss and develop strategies for (1) restructuring clinical education to be consistent with the principles of the 21st-century health system throughout the continuum of undergraduate, graduate, and continuing education for medical, nursing, and other professional training programs; and (2) assessing the implications of these changes for provider credentialing programs, funding, and sponsorship of education programs for health professionals.

A Joint COGME-NACNEP Planning Group is collaborating currently with the IOM and several other Federal agencies and advisory committees to convene a multidisciplinary summit of leaders within the health professions in June 2002. The goal of the summit is to define a work plan for implementation of the changes needed in health professions education and practice to make fundamental improvements in the quality of the Nation’s health care.

CONCLUSION

Persistent and newly emerging critical health care issues such as those outlined in this report will continue to require painstaking analyses and recommendations for creative, new interventions. **COGME believes strongly that there will continue to be a need for a council on graduate medical education with the same structure and function as COGME following COGME's termination on September 30, 2002.** There is essential work that still needs to be done to provide an ongoing assessment of physician workforce trends, and physician training and financing issues.

COGME believes it has been successful in ensuring that vital issues affecting the health professions have received thorough analysis under its current structure and function and that options have been presented in a fashion that stimulated open, far-ranging discussion. COGME members, therefore, have the following recommendations:

1. **A COUNCIL ON GRADUATE MEDICAL EDUCATION SHOULD BE AUTHORIZED TO** advise the Secretary of DHHS and Congress on appropriate Federal policy pertaining to the physician workforce and graduate medical education.
2. **A COUNCIL ON GRADUATE MEDICAL EDUCATION SHOULD FOCUS ON** the adequacy of the supply and distribution of the Nation's physicians, IMGs, financing of undergraduate and graduate medical education programs, and improvement of existing databases.
3. **A COUNCIL ON GRADUATE MEDICAL EDUCATION SHOULD BE AUTHORIZED UNDER** Title VII of the Public Health Service Act.
4. **A COUNCIL ON GRADUATE MEDICAL EDUCATION SHOULD BE AUTHORIZED FOR** a minimum of five years to allow sufficient time for a thorough analysis of physician workforce trends, and physician training and financing issues.
5. **A COUNCIL ON GRADUATE MEDICAL EDUCATION SHOULD BE COMPOSED OF:**
 - a. The Assistant Secretary for Health or the designee of the Assistant Secretary.
 - b. The Administrator of the Centers for Medicare and Medicaid Services.
 - c. The Chief Medical Director of the Department of Veterans Affairs.
 - d. Six members appointed by the Secretary of DHHS to include representatives of practicing primary care physicians, national and specialty physician organizations, IMGs, and medical student and house staff associations.
 - e. Four members appointed by the Secretary of DHHS to include representatives of schools of medicine and osteopathic medicine and public and private teaching hospitals.
 - f. Four members appointed by the Secretary of DHHS to include representatives of health insurers, business, and labor.

The ongoing rapid changes in the U.S. health care system and the crucial problems that it faces will make it necessary for Congress and the Secretary of DHHS to continue to make critical judgments. The function performed by COGME needs to be continued by a new council in order to ensure an ongoing and stable source of analysis, balanced advice, and productive public debate that facilitate wise policy decisions.

REFERENCES

- ¹ C. J. Simon, *Framework for Evaluating COGME 50/50 110 Policy: Underlying Assumptions, Policy Implications, and Data Requirements for Assessing Policy* (Washington, D.C.: COGME, 2000).
- ² The Center for Health Workforce Studies, School of Public Health, *The Health Care Workforce in New York City, 2001: Trends in the Supply and Demand for Health Workers in New York City* (Albany, N.Y.: University at Albany, September 2001).
- ³ B. Barzansky and S.I. Etzel, "Educational Programs in US Medical Schools, 2000-2001," *Journal of the American Medical Association* 286, No. 9 (September 5, 2001): 1049-1055.
- ⁴ D. J. Williams and others, *The 1999 Institutional Goals Ranking Report* (Washington, D.C.: AAMC, 1999).
- ⁵ Advisory Committee on Training in Primary Care Medicine and Dentistry, *Comprehensive Review and Recommendations: Title VII, Section 747 of the Public Health Service Act: Report to the Secretary of the U.S. Department of Health and Human Services, and Congress* (Washington, D.C.: DHHS, 2001).
- ⁶ Association of American Medical Colleges, *AAMC Data Book: Statistical Information Related to Medical Education* (Washington, D.C.: AAMC, 2000).
- ⁷ These comparative statistics are not exact. Only Mexican Americans and Mainland Puerto Ricans are counted as Hispanic enrollees because they are underrepresented in the medical profession.
- ⁸ U.S. Census Bureau, *U.S. Census 2000: Race and Hispanic or Latino Summary File* (Washington, D.C.: Dept. of Commerce, 2001).
- ⁹ M. K. Komaromy and others, "The Role of Black and Hispanic Physicians in Providing Health Care for Underserved Populations," *The New England Journal of Medicine* 334, No. 20 (May 16, 1996): 1305-1310.
- ¹⁰ Accreditation Council on Graduate Medical Education, *ACGME Outcome Project* (Chicago: ACGME, 1999).
- ¹¹ DHHS and others, *Quality Health Services for Hispanics: The Cultural Competency Component* (Washington, D.C.: DHHS, 2000).
- ¹² Association of American Medical Colleges, *Minority Issues and Information: Project 3000 by 2000* (Washington, D.C.: AAMC, 2001).
- ¹³ Ibid.
- ¹⁴ Conrad Amendment ("State 20" waivers for Foreign Medical Graduates), Section 212(e) of the Immigration and Naturalization Act, as amended, 8 U.S.C. 1182(e).
- ¹⁵ American Medical Association, *Physician Characteristics and Distribution in the U.S.* (Chicago: AMA, 2001).
- ¹⁶ M.R. Dunn and others, "The Shifting Sands of Graduate Medical Education," *Journal of the American Medical Association* 276, No. 9 (September 4, 1996): 710-713.
- ¹⁷ American Academy of Family Physicians, *National Residency Match Program, 2001* (Kansas City: AAFP, 2001).
- ¹⁸ Barzansky and Etzel, pg. 1051.
- ¹⁹ Association of American Medical Colleges, *Women in Academic Medicine Statistics 1999-2000* (Washington, D.C.: AAMC, 2000).
- ²⁰ National Center for Health Statistics, *The National Ambulatory Medical Care Survey* (Washington, DC: DHHS, 1990).
- ²¹ Congress created Medicare+Choice in the Balanced Budget Act of 1997 to expand the types of health care options available to Medicare beneficiaries. Medicare+Choice includes options such as Medicare Managed Care Plans and Medicare Private Fee-for-Service Plans.

- ²² “Health Care Costs Rose 7.2 percent in 2000, Making Biggest Increase in Decade,” *Dow Jones News Wires*, September 26, 2001.
- ²³ U.S. Census Bureau, *U.S. Census 2000: Race and Hispanic or Latino Summary File* (Washington, D.C.: U.S. Census Bureau, Dept. of Commerce, 2001).
- ²⁴ Federal Interagency Forum on Child and Family Statistics, *America’s Children: Key National Indicators of Well Being 2001* (Washington, D.C.: DHHS, 2001).
- ²⁵ *Ibid.*, pg. 2.
- ²⁶ The Center for Health Workforce Studies, School of Public Health, *The Health Care Workforce in New York City, 2001: Trends in the Supply and Demand for Health Workers in New York City* (Albany, N.Y.: University at Albany, 2001).
- ²⁷ R.A. Cooper and others, “Current and Projected Workforce of Non-physician Clinicians,” *Journal of the American Medical Association* 280, No. 9 (September 2, 1998): 788-794.
- ²⁸ Institute of Medicine, National Academy of Sciences, *To Err Is Human: Building a Safer Health System* (Washington, D.C.: National Academy of Sciences, 1999).
- ²⁹ Institute of Medicine, Committee on Quality of Health Care in America, National Academy of Sciences, *Crossing the Quality Chasm: A New Health System for the 21st Century* (Washington, D.C.: National Academy of Sciences, 2001).

APPENDIX: COGME REPORTS IN THE CONTEXT OF HEALTH CARE EVENTS

<i>Year</i>	<i>The Healthcare Context</i>	<i>COGME Report</i>
1956	ECFMG established to validate educational credentials of international medical graduates and develop a licensing examination for them.	
1967	National Advisory Commission on Health Manpower Report on National Physician Shortage.	
1968-1975	Expansion in and opening of new medical schools.	
1970	National Health Service Corps began to address physician maldistribution [Critical Health Manpower Shortage Area designation created, later redefined as Health Professionals Shortage Areas (HPSAs)]. Community and Migrant Health Centers established to improve access to care for underserved.	
1971	Initiation of funding support for family practice programs	
1973	Health Maintenance Organization (HMO) Act promoted creation of HMOs in rural areas and defined Medically Underserved Areas (MUAs).	
1976	The Health Professions Educational Assistance Act acknowledged an end to overall physician shortage. The Act codified support for Family Medicine Programs and other policies to overcome primary care physician shortage and geographic maldistribution of physicians.	
1977	Title VII legislation provided support for primary care training programs (particularly in Family Medicine) to increase physicians who will provide care for underserved.	
1981	GMENAC reported <ul style="list-style-type: none"> • Projected physician surplus by 1990s, shortages in some medical specialties and surpluses in others. • Uneven geographic distribution of physicians; need to address medical education and training in context of workforce needs. 	

Year	<i>The Healthcare Context</i>	<i>COGME Report</i>
1981	Lewin/ICF Report on Teaching Hospitals reported declining financial status related to heavy burdens of un- (and under-) compensated care, declines in IME support.	
1984	<i>General Professional Education of the Physician</i> , report of the American Association of Medical Colleges (AAMC), asserted need for revising content and process of medical education to respond to projected needs of the population.	
1985	<p>Report of the Secretary's Task Force on Black and Minority Health reported that minorities have marked health disparities, including excess deaths due to cancer, cardiovascular disease, diabetes, infant mortality, substance abuse, violence, and other health problems.</p> <p>Consolidated Omnibus Budget Reconciliation Act changed GME financing by cutting indirect costs and overall payments, as well as direct costs paid per resident. Act limited GME payments to time required for board certification (5 yr. max.). Payments for IMGs only if passed examinations (FMGEMS, ECFMG, or VQE).</p> <p>COGME was created.</p>	
1988	Review of NIH research funding stated that not enough women are represented in many research studies affecting both genders. Report created outcry from Congressional Caucus for Women's Issues.	First Report of the Council
1990	<p>Perceived problems and issues in U.S. health care system:</p> <ul style="list-style-type: none"> • Rapidly rising health care costs. • Continuing major shift of care from hospitals to outpatient settings. • Continuing disparities in health status and access to care. • Inadequate numbers of physicians from certain minority populations. <p>Immigration and Nationality Act allowed non-U.S. physicians to enter U.S. and provide clinical services if they meet licensure and H1B visa requirements (H1B convertible to permanent visa through petition from family or employer).</p> <p>GAO Report noted difficulties of States in determining quality of education of IMG physicians and differences in licensing procedures for IMGs and U.S. medical graduates.</p>	<p>Second Report – The Financial Status of Teaching Hospitals and the Underrepresentation of Minorities in Medicine</p> <p>Scholar-In-Residence Report – Reform in Medical Education and Medical Education in the Ambulatory Setting</p>
1991	<p>AAMC launched <i>Project 3000 by 2000</i> to raise U.S. medical school minority enrollment.</p> <p>AMA discontinued its National Physician Credentials Verification Service as too costly.</p>	

Year	The Healthcare Context	COGME Report
1992	<p>Reports of “health care system crisis”:</p> <ul style="list-style-type: none"> • Sharply rising expenditures (>\$650 billion in 1990, projected to be \$ one trillion by 1995). • 37 million medically uninsured. • Barriers to basic health care for many. • Basic health care status indicators lag behind most economically developed countries. <p>Clinton elected President on platform proposing major health care reform.</p> <p>AAMC Survey reported only 14.6 percent of U.S. medical school seniors plan to train in primary care.</p> <p>Legislation mandated monitoring and review of physician credential verification system and State licensure practices, including IMG licensure.</p> <p>U.S. Medical Licensing Examination (USMLE) to be taken <i>both</i> by IMGs and USMGs.</p>	<p>Third Report – Improving Access to Health Care Through Physician Workforce Reform: Directions for the 21st Century</p>
1993	<p>President Clinton proposed major health care system and insurance reform involving Government-supervised “managed competition.”</p> <p>Legislation authorized DHHS to survey medical school curricula to determine how women’s health issues were incorporated and, if inadequate, recommend changes.</p> <p>Number of IMG residents equal to approximately 40 percent U.S. medical graduates.</p>	
1994	<p>President Clinton’s health care reform plan defeated in Congress.</p> <p>Bureau of Health Professions projected a shortage of 35,000 primary care, surplus of 115,000 specialty physicians by 2000.</p> <p>Physician Payment Review Commission reported that rural poverty was better indicator of physician shortage than HPSA designation.</p> <p>Immigration and Nationality Technical Corrections Act allowed State public health departments to request waivers for IMGs with J1 Visas to practice in HPSAs/MUAs.</p> <p>IOM Report, <i>Balancing the Scales of Opportunity: Ensuring Racial and Ethnic Diversity in the Health Professions</i>.</p>	<p>Fourth Report – Recommendations to Improve Access to Health Care Through Physician Workforce Reform</p>

Year	The Healthcare Context	COGME Report
1995	<p>Physician Workforce Data:</p> <ul style="list-style-type: none"> • Physician workforce increased by approximately 130,000 over 10 years. • Ratio of specialist physicians to population more than doubled over 30 years. • Ratio of primary care physicians to population in rural areas declined over past 5 years. • IMGs continued to rise (23.8 percent) as percent of all residents (25.6 percent) and total physician workforce. <p>Progressive growth in managed care (reducing need for primary care and specialty physicians):</p> <ul style="list-style-type: none"> • 3-4 fold growth over past decade (covering 2/3 of employees in large firms). • Increased use of nurse practitioners, nurse midwives, and physician assistants. • Considerable geographic variation in types of insurance offered. • Concerns about ability of HMOs and managed care to meet needs of rural populations. • Intense cost-cutting and competition. • Concerns about decreased financial support for medical education. • Concerns about adequacy of education programs to prepare for managed care practice. <p>AAMC survey suggested that GME consortia could provide useful framework for combining ambulatory care and hospital-based training programs.</p> <p>Pew Health Commission Report, <i>Critical Challenges: Revitalizing the Health Professions for the 21st Century</i>, asserted existence of a physician surplus. It recommended a 20 percent cut in medical school class size, restricted GME support for IMGs, and greater minority representation and ethnic diversity.</p>	<p>Fifth Report – Women in Medicine</p> <p>Report to Congress – Process by which International Medical Graduates Are Licensed to Practice in the United States</p> <p>Sixth Report – Managed Health Care: Implications for the Physician Workforce and Medical Education</p> <p>Seventh Report – Physician Workforce Funding Recommendations for Department of Health and Human Services' Programs</p> <p>Joint Report with the National Advisory Council on Nurse Education and Practice – Report on Primary Care Workforce Projections</p>
1996	<p>IOM Report suggested an oversupply of specialty and shortage or balance in supply of primary care physicians.</p> <p>41.7 million in U.S. lack health insurance.</p>	<p>Eighth Report – Patient Care Physician Supply and Requirements: Testing COGME Recommendations</p>

Year	<i>The Healthcare Context</i>	<i>COGME Report</i>
1997	<p>Black, Hispanic, and American Indian/Alaskan Native Americans represented 23.6 percent of U.S. population, yet only 12.2 percent of enrollees in U.S. medical schools (7.1 percent drop in new minority enrollees since 1996).</p> <p>AAMC Survey reported 39.6 percent of U.S. medical school graduates plan primary care training and substantial increases in numbers of residents over past 10 years.</p> <p>Balanced Budget Act (BBA) – Provisions to be fully implemented by 2002:</p> <ul style="list-style-type: none"> • Hospital-specific cap on total residents and ratio of interns and residents to beds. • Reduced IME funding. • Provided measures to soften the impact of cutting residents on DME and IME payments. • Carved out funds for teaching facilities from distributions to managed care (rising from 20 percent in 1998 to 100 percent in 2002). • Financing for training in non-hospital settings. • Transition payments to hospitals voluntarily cutting residents (³ 20 percent over 5 years). • Federal study of overhead and DME on “inappropriate” variations in DME. <p>Many States provided GME support, most linked to perceived workforce needs.</p> <p>Veterans Administration (VA) cut specialty physicians, increased primary care physicians, established “primary specialist” physician category (primary care of patients with specific conditions by specialists), and made corresponding changes in GME slots.</p>	<p>Ninth Report – Graduate Medical Education Consortia: Changing the Governance of Graduate Medical Education to Achieve Physician Workforce Objectives</p> <p>Resource Paper – Preparing Learners for Practice in a Managed Care Environment</p>

Year	<i>The Healthcare Context</i>	<i>COGME Report</i>
1998	<p>Filled primary care GME training program match positions rose 30 percent since 1990 (especially Family Medicine). Matches in non-primary care specialty programs declined.</p> <p>Clinical Skills Assessment started as part of certification process for IMGs.</p> <p>US Census Bureau projected that by 2010, Black, Hispanic, Asian Pacific, American Indian/Alaskan Native Americans would make up 32.0 percent of the total US population.</p> <p>Medical Schools Objectives Project (AAMC) applied measurable objectives to curricula to meet evolving societal needs, practice patterns, and scientific advances.</p> <p>Managed care:</p> <ul style="list-style-type: none"> • Insured 86 percent in employer group plans (14 percent fee-for-service, versus 71 percent in 1990), 15.4 percent in Medicare, 54 percent in Medicaid. • 10 year declining enrollment in staff model HMOs, growth in networks, Independent Practice Associations, Point-of-Service plans, and Preferred Provider Organizations. <p>HRSA funded Undergraduate Medical Education for the 21st Century (UME-21) to develop new medical education programs in managed care settings.</p>	<p>Tenth Report – Physician Distribution and Health Care: Challenges in Rural and Inner City Areas</p> <p>Eleventh Report – International Medical Graduates, the Physician Workforce, and GME Payment Reform</p> <p>Resource Paper – International Medical Graduates: Immigration Law and Policy and the U.S. Physician Workforce</p> <p>Twelfth Report – Minorities in Medicine</p> <p>Thirteenth Report – Physician Education for a Changing Health Care Environment</p>
1999	<p>Balanced Budget Refinement Act (BBRA) slowed multi-year reductions of IME payments.</p> <p>IOM Report, <i>To Err is Human: Building a Safer Healthcare System</i>, detailed high rates of errors in health care system, recommended steps to improve patient safety.</p>	<p>Fourteenth Report – COGME Physician Workforce Policies: Recent Developments and Major Challenges in Meeting National Goals</p>
2000	<p>Medicare, Medicaid and SCHIP Benefits Improvement and Protection Act (BIPA) provided further legislative relief for reduced IME payments to teaching hospitals.</p> <p>Women represented 46 percent of entering US medical students, but only 12 percent of full professors, 7.5 percent of department chairs, and 3.25 percent of medical school deans.</p>	<p>Resource Paper – The Effects of the Balanced Budget Act of 1997 on Graduate Medical Education</p> <p>Resource Paper Compendium – Update on the Physician Workforce</p> <p>Resource Paper – Evaluation of Specialty Physician Workforce Methodologies</p> <p>Fifteenth Report – Financing Graduate Medical Education in a Changing Health Care Environment</p> <p>Council on Graduate Medical Education: What is it? What has it done? Where is it going?</p>

Year	<i>The Healthcare Context</i>	<i>COGME Report</i>
2001	<p>Medicare managed care enrollment declined as insurers left market.</p> <p>US medical schools included 12 percent Black, Hispanic, Asian Pacific, and American Indian/Alaskan Native American students and only 6.2 percent of total faculty from these minority groups (these minorities comprised 21 percent of total US population and were projected by the US Census Bureau to grow to 47.2 percent by 2050).</p> <p>Several States discussed or adopted provisions to support non-hospital, community-based GME.</p> <p>Continued declining applications to US medical schools (still greater than two applicants/position).</p> <p>Continued decrease in USMGs matching for primary care residency programs, especially Family Practice (20 percent drop since 1996-1997).</p> <p>HRSA supported cooperative agreements to develop new programs in interdisciplinary faculty leadership training and education to enhance patient safety in response to COGME-NACNEP recommendations.</p> <p>IOM Report, <i>Crossing the Quality Chasm: A New Health System for the 21st Century</i>, called for fundamental changes in the healthcare system and in education of healthcare professionals to improve quality.</p>	<p>Joint Report with the National Advisory Council on Nurse Education and Practice – Collaborative Education to Ensure Patient Safety</p> <p>Proceedings of the GME Financing Stakeholders Meeting: Public Response to COGME's Fifteenth Report</p> <p>Council on Graduate Medical Education: What is it? What has it done? Where is it going?, 2nd Edition</p>



U.S. Department of Health and Human Services



Health Resources and Services Administration

Bureau of Health Professions